

US LHC Accelerator Research Program
Task Sheet

Task Name: Beam Commissioning (1.2.1.1)

Date: 20 Oct 2005

Responsible Person(s) (overall lead, lead at other labs): E. Harms, A. Drees, M. Furman

Budget (specified for each lab): The total budget for Beam Commissioning is \$400K. \$150K (37.5%) is allocated to Brookhaven National Laboratory and the remaining \$250K (62.5%) to Fermilab. For both laboratories, 70% of the funds, a total of \$280K, is designated for Labor and 30%, \$120K, to Materials, Services, Travel, and Contracts (MSTC). The bulk of MSTC funds are designated for travel expenses.

FY06 Milestones

- 1) January 2006. Participation in Chamonix workshop
- 2) Ongoing. Short (2-week to 1-month) visits to CERN for face-to-face meetings with US and CERN task team members
- 3) June 2006. Production of a document clearly defining U.S. participants and their duties
- 4) Summer 2006. LARP presence for SPS start up

Statement of work for FY06

The goals for FY06 are:

- continue building a U.S. presence at CERN during Beam Commissioning activities. This includes a presence prior to and including injector start up in the summer of 2006. For example, U.S. commissioning representatives are requesting an invitation to Chamonix 2006, where LHC sector testing with beam is expected to be a major topic of discussion. Individual short visits for specific BC topics are also planned.
- ongoing discussions with CERN and LARP collaborators on the involvement of U.S. Accelerator Scientists in the beam commissioning of the LHC.
- production of a task list, including names, proposed dates, and duties/responsibilities for a U.S. presence at CERN for commissioning-related activities. This will be completed in cooperation with CERN beam commissioning management.
- generation of an 'Operations model' which will spell out structure and staffing for U.S. involvement in commissioning both abroad and at home

FY06 0.875 FTE (FNAL), 0.525 FTE (BNL)

Statement of expected follow-on work in subsequent years (include "ultimate" goal and time scale for this sub-program, as well as plans for specific work and rough budget need for next 2 years):

The aim of this effort is to provide a US presence in beam commissioning of the LHC that provides mutual benefit to both LHC operation and to the US effort in accelerator physics. This work will proceed at an increasing level until peaking during LHC commissioning which is expected to begin in 2007. Prior to full beam commissioning, there will be a U.S. presence both at CERN and via remote access to the injector chain turn on and checkout and the LHC sector test with beam now planned for the first quarter of FY06. During commissioning, the goal is to have one significant U.S. presence on the commissioning teams.

FY07 2.0 FTE (FNAL), 1.5 FTE (BNL), 0.5 FTE (LBNL)